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ALFRED P. SLOAN SCHOOL OF MANAGEMENT

BETTER UTILIZATION OF HEALTH CARE MANPOWER THROUGH EDUCATIONAL PROGRAMS: AN OVERVIEW*

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MASSACHUSETTS
INSTITUTE OF TECHNOLOGY
50 MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS 02139

BETTER UTILIZATION OF HEALTH CARE MANPOWER THROUGH EDUCATIONAL PROGRAMS: AN OVERVIEW*

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*This paper is an overview of the second half of a four-year effort, sponsored by the Robert Wood Johnson Foundation, for development, testing, and evaluation of educational models for workers and managers in health delivery and education institutions. Requests for further information should be directed to Mrs. Lena Haarmeyer, M.I.T. Sloan School of Management, E52-544, 50 Memorial Drive, Cambridge, MA. 02139, (617 253-4361).

INTRODUCTION

The Needs

The growing need for better utilization of manpower in the delivery of health care is a significant aspect of the national concern for improving the health care delivery system. This need is apparent in all types of delivery settings -- hospitals, community health centers, and private practices -- and is also of major concern to teaching institutions.

In response to these needs, a major project has been mounted at the M.I.T. Sloan School of Management. It's objective is to increase the effective utilization of health manpower in four areas through the development of educational programs which are designed to reduce the unnecessary organizational constraints caused by a lack of management knowledge and skill on the part of leaders and workers in health delivery and educational institutions. Our approach is based on the assumption that the application of management and applied behavioral sciences, as the result of an educational process, will improve manpower utilization.

This assumption has been tested during the last two years.* During this time we conducted a series of field studies with health delivery and education institutions to study which content from the disciplines of management and applied behavioral science is most relevant to health care problems; what kinds of situations would greatly benefit from this content; who should be exposed to this content; and what are the most effective means for transferring this content. Our most important learning from these experiments is that it is possible, with a minimum amount of focused activity, to effect change in performance within health institutions which results

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*The activities and results of these efforts are described in a forthcoming book.

in releasing more "worker energy" for the delivery of care or for learning how to deliver care. Therefore, we have chosen four areas of work for the next two years. They are described briefly below.

Focus of this Program - Four Needs

During the next two years, we will be developing educational programs in each of four areas of manpower utilization. We have chosen these areas because it is our belief that if they were improved, there would be significant impact on the utilization of health manpower. These areas, described in more detail in the latter portion of the paper, are the following:

1. The underutilization of physician assistants and nurse practitioners. These workers are assuming an increasing portion of the delivery of care, but in many cases their roles remain unclear and they are poorly utilized.
2. The implementation of curricula revisions which are intended to better educate health workers for out-of-hospital practice. Specifically, the issues of managing the necessary changes in faculty attitudes and behavior, and student learning will be addressed.
3. The "interfaces" (relationships between groups) in primary care facilities need to be more effectively managed. This includes the relationships between a primary care facility and its "governing" institutions (hospitals, community boards, funding agencies, and medical schools), and between a facility's administrative or support staff and the delivery staff. In order to manage these interfaces, and at the same time direct

the time and energy of the providers towards patient care and away from these issues, managers need improved skills. In dealing with the interfaces and the direction of energy, they must be able to address issues such as restructuring organizations to facilitate the flow of information, changing reward systems, reallocating decision-making responsibilities, and effective planning.

4. There is a need to increase the conacious effort by members and managers of interdisciplinary health teams to explicitly learn to improve how their teams work and how they relate to the parent organization and the patients. These efforts should focus on how to reduce constraints on team members' energy available for patient care.

THE FOUR SUB-PROJECTS: A DESCRIPTION OF EACH

In order to develop the educational programs, we will conduct field tests, pilot programs, and/or experiments in each of the four problem areas.

1. Improved Utilization of Nurse Practitioners and Physician Assistants

Objectives

We have ample evidence and experience to know that non-physician health workers are often poorly utilized; thereby, wasting valuable manpower resources and providing less care, at lower quality, and at greater

expense.* This project will develop programs for improving the utilization of physician assistants and nurse practitioners.

Approach

Our approach is the following:

(1) To better prepare health students to deal with their own feelings of competence, identity, and professional role; have strategies and methods for dealing with these; and have an ability to influence others.

(2) To prepare educators of these students to teach these skills to the student; be aware of the student's problems with identity and competence; provide support and supervision; accept the responsibility to act as a linkage between the student and employer (not just a placement person); and accept the responsibility for providing continued support to graduates.

(3) To make employers (in group practice, in health centers, and outpatient departments), more aware of the students' knowledge and skills; help their accepting the responsibility for providing guidance, opportunities for growth and development; and actively "negotiate" with the student to help define his or her role and help in the "joining up" process.

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*See: "Growing Pains: Issues in Expanding the Nurse's Role in Primary Care," by Eric Herzog, M.I.T., Sloan School Working Paper No. 696-74.

"Factors Influencing the Expansion of the Nurse's Role in Primary Care Settings: A Study of the Graduates of a Nurse Practitioner Program," by Mark S. Gerstein and Eric L. Herzog, M.I.T., Sloan School Working Paper No. 639-73, January 1973.

"Work Relationships in the Delivery of Health Care: An Analysis of the Division of Labor Between Physicians and Nurse Practitioners in Outpatient Clinics," Doctoral Dissertation by Eric Herzog, M.I.T. Sloan School, September 1973.

We predict that this approach will lead to a better transition of the student to the work setting; the new worker will be better utilized (individually and as part of the team); performance of the worker and the team will be improved; the worker will continue to grow, learn, and develop.

Outputs

Output from our efforts will be the following:

For the student, there will be a program of knowledge and skill. For the educators of these workers there will be guidelines on how to teach the student; and strategies and guides for introducing the materials; and developing linkages to employers; and providing support to graduates. For the employer, there will be a set of guidelines on how to effectively use the new worker and bring the new worker into the organization.

2. Managing the Implementation of a New Curriculum

Objective

Many educational institutions are revising their curricula. For these efforts, deans, administrators, curriculum coordinators, and other faculty need specific knowledge about the following: managing a change process; handling ambiguity and transitions; building information and feedback systems during the change; handling resistance and stress; and maintaining quality during the transition. Our objective is to develop materials and programs which will provide skills and knowledge in these areas.

Approach

Our approach is to give the faculty these skills and knowledge before, or just as they enter, a curricula change process, and to give some reinforcement. We then predict that the following will occur:

- there will be a smoother transition to a new curriculum;

- more creative teaching modes will be implemented and they will be closely related to the needs of the students;
- there will be better collaborative teaching;
- the students will perceive the curriculum as relevant and will see the practical applications;
- there will be more synergy in the presentation of the material and more integration of the student's learning;
- there will be better handling of the ambiguity by the faculty, e.g., being able to teach the new and old curricula simultaneously during the transition;
- the faculty and programs will be more student-oriented.

Output

The outputs of this effort will be some specific guidelines, including educational programs and alternative action plans, for "managers" of these curricula changes. These will be developed and tested in two nursing schools, a department of medicine in a teaching hospital, and a medical school.

3. Improving the Management of Institutional "Interfaces"

Objectives

Primary health care deliverers are underutilized when they find reason to spend much of their time and energy on "management" problems. With increasing demands for primary health care delivery, and with limited funds and personnel to provide it, quality health care can only be delivered when health workers are free to spend as much of their time and energy as is possible in activities directly related to "hands-on" patient care. Towards this goal, this project intends to demonstrate the more effective utilization of delivery and support personnel in primary care institutions as a result of having educated managers* to cope more effectively with the complex (and sometimes unique) nature of these settings.

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*"managers" includes Project Directors or Administrators, Business Managers, Medical or Clinical Directors, Program Heads, Nursing Supervisors, etc.

Approach

We are convinced that deliverers will be better able to deliver quality care if they do not spend their time and energy on "management-oriented" issues such as:

(1) loss of patient records or lack of methods for getting them when they are needed;

(2) time-consuming ad hoc committees and meetings of deliverers to examine changes in policies, procedures, etc. in response to external demands from community, hospital or medical schools;

(3) job insecurity resulting from lack of certainty about funds and inefficient hiring/firing procedures;

(4) uncertainty about how procedural and policy decisions should be made (e.g., through clinical and/or administrative chains of command) resulting in duplication of efforts to "cover all the bases";

(5) difficulty in scheduling (or uncertain) clinical coverage by professional staff due to complex schedules of staff and multiple ownership of their time by hospital, medical school, etc.

This can be done only if managers do get exposed to educational content which enables them to understand and cope with the problems and conflicts that occur at the "interfaces" between:

1. themselves and their deliverers (e.g., administration vs. clinical staff); and
2. themselves and the multiple back-up institutions, governing agencies and consumer groups with whom they must interact.

To demonstrate this, we will design and test an educational program for managers in these settings. We will evaluate the effects of such a program by assessing the degree to which these managers manage the interfaces in ways that minimize or decrease the time and energy deliverers focus on these issues.

Output

The output of this effort will be educational materials and programs which can cost-effectively provide managers of primary care institutions the knowledge and skills necessary to cope with these management problems. Specifically, this will include:

(1) tested curricula and materials for educating managers to better manage "interface" issues in primary care settings;

(2) designs/guidelines for implementing an educational program for health managers in generalizable settings;

(3) methods/protocols for evaluating the managerial effectiveness of primary care centers in terms of manpower utilization;

(4) an evaluation of the effect of educational programs of managerial effectiveness and manpower utilization.

4. Improving Team Effectiveness

Objectives

More effective utilization of health care teams is being hindered by (1) a lack of exposure of such teams to educational inputs, and (2) a lack of individual and organizational awareness that alternative ways exist to structure and manage teams. The mere existence and even publicizing

of educational resources has not and will not be sufficient. Teams are not receiving much needed education through any source.*

This project will develop educational programs for members and managers of health teams, which will eliminate many of the existing obstacles hindering the more effective utilization of health care teams.**

Approach

Health workers and administrators are more likely to effectively utilize and support the team approach and provide the needed education known to improve team effectiveness if:

(1) the misperceptions, presently held by administrators and health workers of the cost-effectiveness of education for health teams, can be reduced;

(2) the attitudes of health workers and administrators toward teams (e.g., "they're hopeless") can be changed;

(3) administrators and health workers in health care organizations can develop the knowledge or skills needed to:

- identify teams' needs for education and development;
- introduce and support educational/developmental programs in an effective manner;
- manage the changes experienced with "developed" teams;

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*See, Rubin, I., Plovnick, M., and Fry, R., "Initiating Planned Change in Health Care Systems," Journal of Applied Behavioral Science, Vol. 10, Number 1, 1974.

**Wise, Harold et al, Making Health Teams Work: A First Step, Ballenger Publishers, 1974, Cambridge, MA. 02138.

Rubin, I., Fry, R., and Plovnick, M., "Making Health Teams Work: An Educational Program," M.I.T. Sloan School of Management Working Paper No. 710-74, 1974.

(4) administrators and health workers can become more aware of the availability of educational resources (programs, consultants, teachers, etc.) to help teams improve their effectiveness.

Therefore, health workers and administrators in certain "pace setting" schools of public health, schools of health management, graduate nursing programs, and residency programs in primary care will be the targets for educational interventions because:

(1) students are least set in their roles and ways and are more likely than practicing managers and health workers to learn the skills and attitudes necessary for effective work on teams or managing teams;

(2) these "graduate" students are very appropriate targets since many will have had exposure to team delivery (e.g., physicians in residency programs) and can better appreciate the benefits/implications/ problems associated with teams and they have a ready opportunity to practice what they learn;

(3) by focusing on "select" schools/residencies we hope to establish a trend, and expect a "seeding" effect from the early graduates of our programs by establishing a "critical mass" of change agents with high status credentials;

(4) students are more accessable from a logistical (time, geography, attention) point of view than practicing managers and physicians.

Outputs and Evaluation

Our basic thrust, therefore, will be to develop and test materials and strategies to educate and directly influence those people, who in the immediate future, are most likely to be in a position to influence the utilization and education of functioning teams. Our outputs from this effort will include:

(1) sets of tested educational materials and implementation strategies transferable to other institutions of health care education;

(2) a cadre of "educated" professionals moving into the field, whom we expect will behave in the following ways:

a. as these people go on to team rotations or into settings to work on teams, they will have the motivation and skills to initiate education in that team;

b. as these people go into administrative/support positions in organizations with teams (or where teams "ought" to exist) they will have the motivation and skills to initiate changes to create teams, offer education to teams, etc.

To answer the question of whether educational programs in health schools can improve the effectiveness of health care teams by enhancing the ability of managers and health workers to meet the developmental/educational needs of their teams, we plan to track individuals after they complete our program to see:

(1) what kinds of places they go into (teams/no teams);

(2) if they do try to initiate changes to help get teams educated;

(3) if they try to form appropriate teams in the settings they go into;

(4) if they attempt to call upon outside resources (persons/materials, etc.);

(5) if they attempt to influence/persuade colleagues around issues regarding teams.

In depth interviews and periodic tracking of "graduates" of the first two pilot courses/programs will enable us to develop and refine an evaluation methodology and protocol.

Although this is the primary focus of this proposal we plan several other kinds of efforts to facilitate achievement of the overall goals.

We expect to refine and publish our own team development program including a set of Guidelines for managers for wide spread distribution.* Our output from this effort will be one educational alternative known to help health teams more effectively utilize their resources and deliver better care.

In addition, we plan to collaborate with other programs being designed in general management education for health systems and with programs for undergraduate education concerning health teams.** Finally, opportunities

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*In the first two years of this project, a self-instructional set of team development materials were developed and tested: "Health Team Development Program," by Irwin Rubin, Mark Plovnick, and Ronald Fry, in press.

**Positive linkages exist, for example, between this program on team effectiveness end the Curriculum Change and Management of Interface components of the total proposal. The Institute for Health Team Development, for example, is focusing on the training of faculty who function at the undergraduate level of health care education.

have developed, and will continue to develop, through which we can educate other behavioral scientists (to the opportunities and unique problems of working in health care systems) and health professionals. Whenever appropriate, on a selective basis, we will respond to such opportunities which appear to have high leverage.

Date Due

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